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EDITORIAL

rpth research & practice in thrombosis & haemostasis

Diversity, equity, and inclusion in publishing: Calling thrombosis and hemostasis journals to action in support of women

Research and Practice in Thrombosis and Haemostasis (*RPTH*), a journal of the ISTH, is committed to diversity, equity, and inclusion. Each fall during #WomenInMedicine month, we report information about diversity, equity, and inclusion at *RPTH*.[1,2] This year brought the stresses of coronavirus disease 2019. Earlier in the year, we reported that the gender gap in publishing affecting women did not widen at *RPTH* during the months of the coronavirus shutdown, although it appeared that women were less frequently publishing articles on coronavirus.[3] In our 2019 annual report,[2] we observed a nonsignificant decrease in the percentage of women invited to author articles, but women authors were otherwise similar in percentage to the ISTH membership.

We took several steps to improve equity after the 2019 report. The editorial team discussed the decline in invitations to women authors and set a goal to reverse this trend. We also emphasized reviewer invitations to women. In our annual review of editorial board membership, some members were retired and new members invited, and the percentage of women on the board increased from 45% to 51%, providing a larger pool of people more likely to engage in peer review and publishing with us. We began collecting self-reported gender data from authors and peer reviewers to reduce misclassification in these reports. Finally, goals were set for engagement to reflect the ISTH membership, which is 45% women.

1 | AUTHOR GENDER

For this report, as previously, we tabulated author gender for all issues from October 2019 through July 2020. We separately counted the senior/corresponding author and authors of invited articles. Considering all authors, using self-report when available (on 20% of all authors to date) and inferring author gender based on names and web search, there were 7 authors with unknown gender, and 2 preferred not to report; these were counted in the denominator. Of 842 authors, 368 were women (43.7%). Corresponding authors were 43.1% women. We invited 21 women and 16 men to write articles including commentaries, forums, reviews, and tutorials (56.8% women). There were 130 total invited article authors, and 61 were women (46.9%). These results are summarized in comparison to our prior two reports in Figure 1. The overall percentage of women authors has remained stable, with increases in the number of women as corresponding authors, both overall and for invited articles, and increases in women coauthors of invited articles.

To place these findings in context, we examined data for journals covering similar content as *RPTH* using the web tool of Thomas and colleagues (https://emgthomas.shinyapps.io/gender_and_invited_commentaries/). 4 These authors reported that in 2549 journals from 2013 to 2017, women were 21% less likely to be invited to author commentaries than men, even after adjusting for their experience and scientific work impact (adjusted odds ratio [OR] 0.79; 95% confidence interval [CI], 0.77-0.81). Further, women with greater experience were 13% less likely per decade of experience to be commentary writers. Using the web tool created to perform these calculations, journals from all specialties favored men to various degrees, even fields with a female preponderance such as obstetrics and gynecology. Hematology journals had an OR of 0.72 (95% CI, 0.64-0.82), similar to cardiovascular medicine journals (OR, 0.78; 95% CI, 0.73-0.85). Biochemistry journals were less likely to involve women (OR, 0.58; 95% CI, 0.42-0.81).

We evaluated women's authorship of commentaries from 2013 to 2017 for selected journals covering thrombosis and hemostasis topics using the above tool (Table 1) and tabulated the gender of editorial teams. Few of these journals currently have women editors-in-chief. There was a great difference in the number of commentaries published, and all but two journals (that published very few commentaries) favored men as commentary authors, though these findings were not always statistically significant. The current percentage of women on the editorial board did not correlate with having a higher OR of women authors of commentaries ($r^2 = 0.08$). Figure 2 shows these data plotted using the above web tool by the 2016 Journal Cite Score. Higher journal cite score seemed to correlate with ORs closer

to 1.0 (i.e., gender equity). This may indicate that journals with more influence, while they still favor men, may have methods in place to attempt to minimize bias. We do not have similar data for *RPTH*, and the number of commentaries is low; however, results above for invited articles suggest that we are achieving gender equity in invited article authorship.

2 | REVIEWER GENDER

To achieve equity in publication, equity among peer reviewers is important and may have benefits in other journal metrics. One recent report demonstrated peer review bias at *eLife*, such that when reviewers for a given article were all male, they were less likely than

TABLE 1 Odds ratio of women versus men as commentary authors for journals covering thrombosis and haemostasis

Journal title	Number of commentaries	Adjusted OR	95% CI	Current percentage of women on editorial board[a]	Woman editor-in-chief
Research and Practice in Thrombosis and Haemostasis	NA	NA	NA	51	Yes
The Lancet Haemotology	91	0.45	0.24-0.85	64	Yes
Blood	624	0.73	0.59-0.91	37.1	Yes
Thrombosis Research	34	0.68	0.25-18.87	25.7	1 each
European Journal of Haemotology	12	0.18	0.02-1.88	20.6	No
American Journal of Hematology	14	0.31	0.04-2.55	52.6	No
British Journal of Haematology	31	0.39	0.11-1.42	22.9	No
Journal of the American Heart Association	79	0.54	0.25-1.14	33.3	No
Arteriosclerosis, Thrombosis, and Vascular Biology	115	0.56	0.32-1.01	25	No
Haemophilia	23	0.62	0.23-1.69	32.1	No
Thrombosis and Haemostasis	64	0.63	0.26-1.51	18.3	No
Journal of Thrombosis and Haemostasis	63	0.64	0.31-1.34	19.4[b]	No
Circulation	410	0.83	0.61-1.15	27.4	No
Platelets	4	2.34	0.05-114	34.8	No
Journal of Thrombosis and Thrombolysis	8	3.15	0.25-39.5	14.2	No

Abbreviations: CI, confidence interval; NA, not available; OR, odds ratio.

[a]Since journals infrequently report this, percentages were calculated based on inference from each member's name using web searches.

[b]This journal will announce a new editorial board in January 2021 with a higher percentage of women.

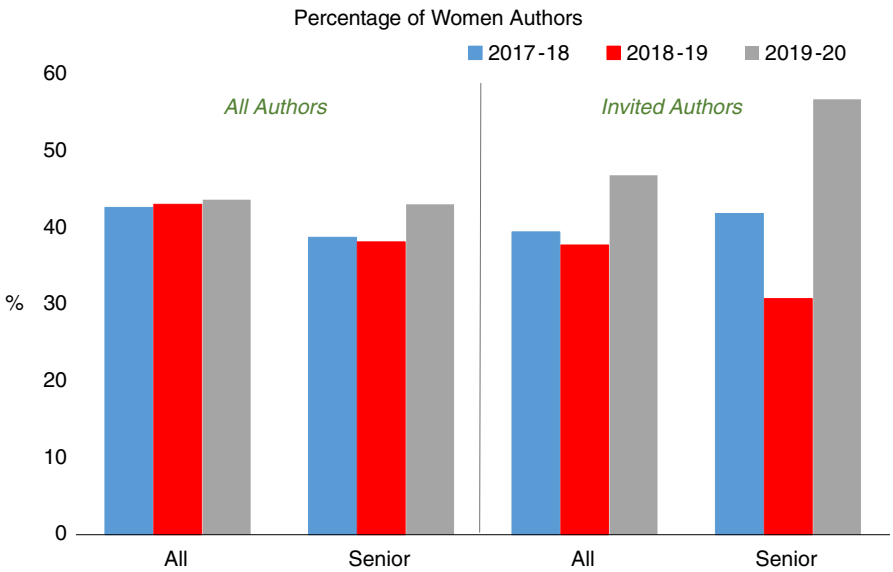

FIGURE 1 Author gender data for 2017-2020, *Research and Practice in Thrombosis and Haemostasis*

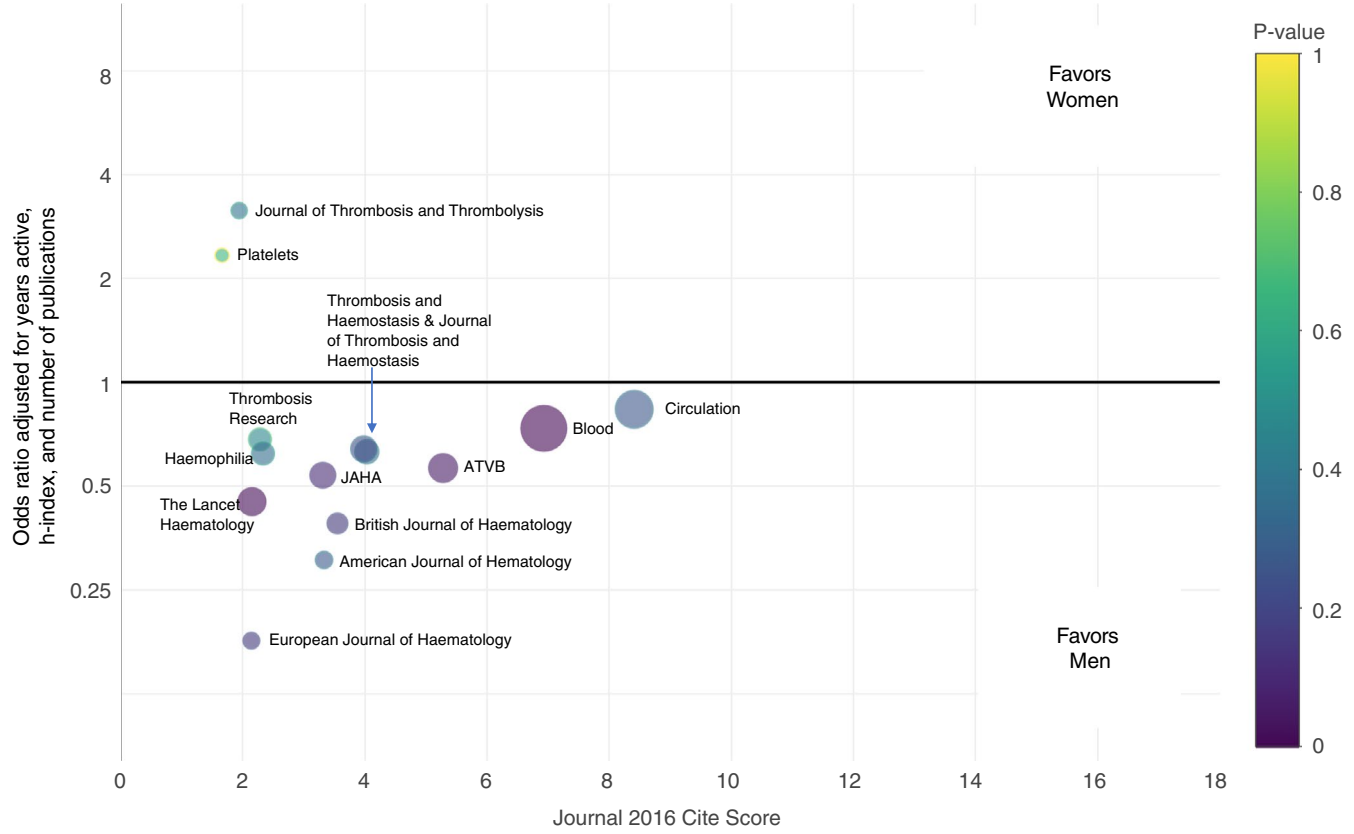

FIGURE 2 Adjusted odds ratio of women versus men as commentary authors, by journal cite score, for journals covering thrombosis and hemostasis. Odds ratios are adjusted for author experience and science impact. Each circle represents the odds ratio estimated for each journal as labeled. Larger circle diameter indicates narrower confidence intervals for the odds ratio estimate. The circle color indicates the probability (*P* value) that there is no association between gender and invited commentary authorship for that journal. Data derived from https://emgthomas.shinyapps.io/gender_and_invited_commentaries/

mixed-gender reviewers to recommend acceptance of articles with women senior authors.[5] As a response, one journal implemented a Reviewer Equity Policy, requiring at least one woman reviewer for all articles. After 12 months, the percentage of articles reviewed by at least one woman increased from 35% to 78%, time to secure reviewers decreased, time in peer review decreased, and the number of submissions from women senior authors increased.[6]

From mid-September 2018 to mid-September 2020, of the top 100 *RPTH* peer reviewers, based on number of invitations, 35% were women, lower than our goal of 45%. Of reviewers who agreed to review four or more times, 43.5% were women, while of reviewers who completed four or more reviews, 46.1% were women. These findings suggest that of reviewers who are frequently asked to review, women are more likely to agree and return their reviews than men. Over time, engagement by women in peer review appears to be increasing (data not shown). The editorial team is reiterating our goal to achieve 45% or more women peer reviewers, reflecting the ISTH membership.

3 | CONCLUSIONS

The publishing community of journals in thrombosis and hemostasis must improve representation of women in publishing. Mounting data, such as that reviewed here from journals reporting thrombosis and hemostasis science, supports a gender gap in publishing. Steps taken at *RPTH* have minimized this. These include having a woman editor-in-chief, equal representation of women and men as associate editors and editorial board members, repeated metric measurement and public reporting, and regular discussions on the topic by the team. Editorial board members tend to be frequent reviewers, and women are engaged as peer reviewers, although they are less likely to be asked than men. Involvement of women authors and reviewers is similar to or higher than the percentage of women members of the ISTH. We will continue efforts in this area, and, as before, we call on the thrombosis and hemostasis community of journals to track and publish similar data.

RELATIONSHIP DISCLOSURE

The authors declare nothing to report.

KEYWORDS
authorship, diversity in STEM, gender, peer review, thrombosis and hemostasis

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